

# Ruizhe Wang

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## EDUCATION

### The Chinese University of Hong Kong, Shenzhen (CUHKSZ)

Bachelor of Engineering in Electronic Information Engineering

*Sept. 2018 – Present*

GPA: 3.87/4.00 (Cumulative), 3.84/4.00 (Major), Major Ranking: 3/44

Core Courses: Principles in Communication Systems (A), Wireless Communications (A-),

Selected Topics in Information Theory (A), Multi-Antenna Wireless Communications (IP)

## HONORS & AWARDS

**Dean's List**, School of Science and Engineering: AY2018-2019, AY2019-2020, AY2020-2021

**Master's List**, Shaw College: AY2018-2019, AY2019-2020

**Academic Performance Scholarship**: 2019 (class A), 2020 (class B)

**Half Tuition Scholarship**: 2018

## RESEARCH EXPERIENCES

**Streaming Code and Its Delay Profile** | CUHKSZ | Research Assistant

*July 2020 – Present*

Advisor: Shenghao Yang, Assistant Professor at School of Science and Engineering, CUHKSZ

- Evaluated spectrum efficiency and throughput of different categories of streaming codes by Matlab.
- Designed a delay-optimized random linear codes to increase success rate under low delay constraint.
- Established streaming coding schemes for random linear codes and shift-XOR codes and compared their performance under binary erasure channel.

**Distributed Backdoor Attack to Federated Learning** | CUHKSZ | Independent Study

*Jan. 2021 – May 2021*

Advisor: Jianwei Huang, Presidential Chair Professor and Associate Dean of the School of Science and Engineering, CUHKSZ

- Reconstructed distributed backdoor attack in previous research.
- Investigated and verified the performance of existing attack patterns.
- Designed different schedules of distributed backdoor and evaluated the attack performance.

## INTERNSHIP

**Undergraduate Student Teaching Fellow** | School of Science and Engineering | CUHKSZ | Shenzhen

*Sept. 2019 – Present*

- Prepared tutorial materials and held tutorial session in five courses: Calculus I (AY2019-2020, Fall Term), Calculus II (AY2019-2020, Spring Term), Linear Algebra (AY2020-2021, Fall Term), Ordinary Differential Equations (AY2020-2021, Spring Term), Digital Logic and Systems (AY2021-2022, Fall Term).
- Held office hour for students to ask questions or other consultations of the course.

**Research Intern** | Wireless Network Research Dept. | Huawei Technologies Co., Ltd. | Shanghai

*June 2021 – Aug. 2021*

- Developed simulation platform for forward erasure correction codes including Raptor codes, Reed-Solomon codes, RaptorQ codes and shift-XOR codes and evaluated them under different channels
- Designed sliding-window coding scheme and shift-added coding scheme to expand the possible code length of Reed-Solomon codes. Evaluated their performances.
- Implemented complete shift-XOR library in C for further investigation.

**Student Assistant** | Admission Office | CUHKSZ | Shenzhen

*Jan. 2019 – June 2019*

- Gathered and organized information of admission information of other universities.
- Handled telephone counselling about undergraduate enrollment of students.

## SKILLS

**Programming Language**: Matlab, Python, C/C++, Julia.

**Software & Tools**: LaTeX, Visual Studio Code.

**Standard Tests**: TOEFL: 105 (Reading 29, Listening 27, Speaking 23, Writing 26)